

CLAIMS

What is claimed is:

1. A computer implemented method for discovering data communication network configuration information, comprising steps of:

invoking a network discovery function;

executing the invoked network discovery function for examining the network using individual ones of a plurality of network configuration discovery protocols; and

during the execution of the step of examining, building a list containing discovered network configuration information.

2. A method as in claim 1, wherein the plurality of network configuration discovery protocols comprise a set of protocols selected from a Salutation protocol, a Service Location Protocol (SLP), a Lightweight Directory Access Protocol (LDAP), Domain Name Services (DNS) protocols, and a Dynamic Host Configuration Protocol (DHCP).

3. A method as in claim 2, wherein the DNS protocols comprise at least one of a DNS SRV Record protocol, a DNS MX Record protocol, a DNS Start of Authority Protocol, a DNS NS protocol and a DNS PTR protocol.

4. A method as in claim 1, wherein during the execution of the step of examining the network using individual ones of the plurality of network configuration discovery protocols, the individual ones of the plurality of network configuration discovery protocols are executed sequentially.

5. A method as in claim 4, wherein the plurality of network configuration discovery protocols are executed in a sequence comprised of a Salutation protocol, a Service Location Protocol (SLP), a Lightweight Directory Access Protocol (LDAP), Domain Name Services (DNS) protocols, and a Dynamic Host Configuration Protocol (DHCP).

6. A method as in claim 1, wherein the list is stored as a location object in a persistent database.

7. A method as in claim 6, wherein a location object may be imported into the persistent database, or exported from the persistent database.

8. A method as in claim 6, wherein a location object may be exported from the persistent database, and made available to be imported into another persistent database.

9. A method as in claim 6, wherein an application program queries the persistent database for a location object, and uses the network configuration information stored in the location object while connected to a network from which the location object was derived.

10. A digital data storage media that is readable by a computer and that stores a software program that implements a process for discovering data communication network configuration information, the software program causing the computer to operate so as to invoke a network discovery function, to execute the invoked network discovery function to examine the network using individual ones of a plurality of network configuration discovery protocols and, during the network examination, to build a list containing discovered network configuration information.

11. A digital data storage media as claimed in claim 10, wherein the plurality of network configuration discovery protocols comprise a set of

protocols selected from a Salutation protocol, a Service Location Protocol (SLP), a Lightweight Directory Access Protocol (LDAP), Domain Name Services (DNS) protocols, and a Dynamic Host Configuration Protocol (DHCP).

12. A digital data storage media as claimed in claim 11, wherein the DNS protocols comprise at least one of a DNS SRV Record protocol, a DNS MX Record protocol, a DNS Start of Authority Protocol, a DNS NS protocol and a DNS PTR protocol.

13. A digital data storage media as claimed in claim 10, wherein the computer executes individual ones of the plurality of network configuration discovery protocols sequentially in a sequence comprised of a Salutation protocol, a Service Location Protocol (SLP), a Lightweight Directory Access Protocol (LDAP), Domain Name Services (DNS) protocols, and a Dynamic Host Configuration Protocol (DHCP).

14. A digital data storage media as claimed in claim 10, wherein the computer causes the list to be stored as a location object in a persistent database, wherein a location object may be imported into the persistent database, or exported from the persistent database, and wherein a location object may be exported from the persistent database and made available to be imported into another persistent database.

15. A digital data storage media as claimed in claim 14, wherein the computer operates to respond to an application program that queries the persistent database for a location object, to return the location object to the application for use by the application while connected to a network from which the location object was derived.

16. A digital data processing system comprising a data processor, a memory, and at least one network adapter for attaching the data processor to a

data communication network, said memory storing a software program that controls said data processor for discovering data communication network configuration information by examining the network using individual ones of a plurality of network configuration discovery protocols and, during the network examination, for building a location object in a persistent database portion of said memory, said location object containing discovered network configuration information for use by an application while attached to the network.

17. A digital data processing system as claimed in claim 16, wherein the plurality of network configuration discovery protocols comprise a set of protocols selected from a Salutation protocol, a Service Location Protocol (SLP), a Lightweight Directory Access Protocol (LDAP), Domain Name Services (DNS) protocols, and a Dynamic Host Configuration Protocol (DHCP).

18. A digital data processing system as claimed in claim 17, wherein the DNS protocols comprise at least one of a DNS SRV Record protocol, a DNS MX Record protocol, a DNS Start of Authority Protocol, a DNS NS protocol and a DNS PTR protocol.

19. A digital data processing system as claimed in claim 16, wherein the data processor is controlled to execute individual ones of the plurality of network configuration discovery protocols sequentially in a sequence comprised of a Salutation protocol, a Service Location Protocol (SLP), a Lightweight Directory Access Protocol (LDAP), Domain Name Services (DNS) protocols, and a Dynamic Host Configuration Protocol (DHCP).

20. A digital data processing system as claimed in claim 16, wherein a location object may be imported into the persistent database, or exported from the persistent database, and wherein a location object may be exported from the persistent database and made available to be imported into another persistent database.